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Ref: 8EPR-N

Thomas Malecek, District Ranger
Divide Ranger District
Rio Grande National Forest
13308 West Highway 160
Del Norte, CO 81132

RE: EPA Comments on Draft Environmental Impact Statement, Big Moose Vegetation Management Project, CEQ # 20100367

Dear Mr. Malecek:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, *et seq.*, and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the August 2010 Draft Environmental Impact Statement (DEIS) for the Big Moose Vegetation Management Project. This DEIS was prepared by the Divide Ranger District of the U.S. Department of Agriculture Forest Service (USFS) Rio Grande National Forest to analyze potential environmental impacts associated with managing timber stands affected by spruce beetle and the potential impacts of aspen regeneration efforts using various treatment methods, including prescribed burning.

The Big Moose Vegetation Management Project area covers 22,152 acres and lies approximately 15 miles southwest of the town of Creede, in Hinsdale and Mineral Counties, Colorado. The Weminuche Wilderness Area borders the south and southwest sides and private land borders the north and northeast sides of the project area. The analysis area includes the Love Lake Fishing Area, portions of the Copper Mountain/Sulphur, Ruby Lake, and Sulphur Tunnel Roadless Areas, and numerous trails and trailheads.

Four alternatives are analyzed in the DEIS and range from no action (Alternative 1) through increasingly more action to Alternative 4 (Preferred Alternative). All action alternatives would harvest and regenerate timber stands killed by, or infested with, spruce beetle and would treat areas to promote aspen regeneration and health through a mix of timber harvest, reforestation, and prescribed fire to promote aspen. For the most part, the existing road network would be sufficient for access with varying degrees of need for reopening old roads and minor temporary new road construction (to be closed after project completion), depending on the

alternative. A brief summary of the alternatives is as follows:

- Alternative 1 – No Action - No vegetation management treatments associated with this project would occur. Current activities such as livestock grazing, recreation, and road maintenance on 35 miles of existing open roads would continue.

- Alternative 2 (Limited Action Alternative) - Designed to be a scaled down version of Alternative 3, this alternative would harvest timber on approximately 2,608 acres using sanitation/salvage harvesting (2,354 acres) and clearcut harvesting (253 acres) to yield up to 35 million board feet (MMBF) of timber products. After harvest, reforestation would occur on 300-1,250 acres. Prescribed fire treatment would occur on approximately 1,263 acres (in some areas used in conjunction with timber harvest). New temporary road construction of 0.8 miles would be necessary for access and 11.8 miles of currently closed roads would be temporarily re-opened.

- Alternative 3 (Proposed Action) – This alternative would use the same treatments as Alternative 2 but on a larger area. Timber harvest would occur on approximately 4,273 acres using sanitation/salvage harvesting (3,803 acres) and clearcut harvesting (469 acres) to yield up to 55 MMBF of timber products. After harvest, reforestation would occur on 800-2,500 acres. Prescribed fire treatment would occur on approximately 3,133 acres (in some areas used in conjunction with timber harvest). New temporary road construction of 1.1 miles would be necessary and approximately 19 miles of currently closed roads would be temporarily re-opened.

- Alternative 4 (Preferred Action) – In addition to applying the same treatments as Alternatives 2 and 3 but on more acreage, this alternative includes the use of pre-commercial thinning. Timber harvest would occur on up to 5,190 acres using sanitation/salvage harvesting (up to 4,430 acres) and clearcut harvesting (up to 760 acres) to yield up to 65 MMBF of timber products. Pre-commercial thinning on up to 500 acres would occur in areas of dense spruce and fir trees. After harvest, reforestation would occur on approximately 1,000-2,500 acres. Prescribed fire treatment would occur on up to 6,000 acres (in some areas used in conjunction with timber harvest). New temporary road construction of 2.5 miles would be necessary and 19 miles of currently closed roads would be temporarily re-opened.

In an April 3, 2009 letter, EPA provided input during the scoping process for this project, and we appreciate that the USFS addressed several of our comments in the DEIS. As a result, our concerns with the August 2010 DEIS have been narrowed to these remaining issues: (1) air quality; (2) aquatic resources; and (3) threatened and endangered species. These concerns are the basis for the EPA rating discussed at the conclusion of this letter.

Air Quality

The project area is near the town of Creede, as well as a mandatory Class I Federal area (Weminuche Wilderness Area). In addition to health-based standards to protect ambient air quality, the Clean Air Act requires special protection of visibility in the nation's large National Parks and Wilderness Areas (identified as mandatory Class I Federal areas) and establishes a national goal for "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I federal areas which impairment results from man-made air pollution." EPA's Clean Air Act implementing regulations require states to submit State Implementation Plans that, among other things, demonstrate attainment of the National Ambient Air Quality Standards (NAAQS), as well as reasonable progress toward the national visibility goal. Actions by Federal Land Managers that lack adequate mitigation of air quality impacts could impede a state's ability to meet Clean Air Act requirements.

Data: EPA is concerned that no air quality data regarding existing conditions are provided in the DEIS, even though it appears such data is readily available from the Colorado Air Pollution Control Division and/or the EPA AirExplorer site (http://www.epa.gov/airexplorer/) and VIEWS site for air quality related values (AQRVs) (http://views.cira.colostate.edu/web/). Information regarding current conditions will be an important tool for monitoring the impacts of the various activities contemplated under the preferred alternative. Decision-makers will need to understand baseline conditions in an effort to ensure that Big Moose Vegetation Management Project activities, when combined with air quality impacts from external sources, do not adversely impact the NAAQS or AQRVs such as visibility. At a minimum, the Final EIS should summarize existing air quality in and around the project area, including trending of air quality at Weminuche Wilderness Area over the past several years, and should identify sensitive receptors (such as surrounding population centers and other Class I and Class II areas in the vicinity).

Prescribed Fire: The action alternatives of the Big Moose Vegetation Management Project include the application of prescribed burning to acreage varying from 1,263 to 6,000 acres, depending on the alternative. This significant prescribed fire activity may cause degradation of air quality and visibility in the region. While we realize that the individual burn plans for this project would quantify expected emissions from the prescribed burns, EPA is concerned that the DEIS does not contain any air impact analysis presenting direct, indirect, or cumulative air quality impacts that would be associated with prescribed burning on the large acreage under consideration. Such information should be included in the Final EIS and is necessary for the decision-maker to ensure protection of air quality and visibility if the prescribed burns are ultimately conducted.

In addition, we recommend that USFS consult with the Colorado Air Pollution Control Division for any modeling, mitigation, or other measures required under State regulations or the State Implementation Plan to address Clean Air Act requirements. Further, we recommend that the Final EIS include: (1) discussion of appropriate smoke monitoring techniques and mitigation (including meteorological conditions favorable for mitigated prescribed fire smoke and alternatives to prescribed fire such as mechanical fuel reduction methods); (2) requirements for

the incorporation of the Interagency Prescribed Fire Planning and Implementation Procedures Guide (July 2008) into the site-specific burn plans designed for each prescribed burn conducted under this project; and (3) commitment to public notification of pending burns.

Harvest-, Transportation-, and Dust-Related Emissions: Air quality and AQRVs are also negatively impacted by emissions from heavy diesel equipment utilized for harvesting/thinning of trees, idling trucks used for transportation of wood products, and dust generated from proposed activities. EPA is concerned that the DEIS does not contain an inventory of predicted emissions that would be associated with the harvesting/thinning of trees and the associated activities on the large acreage under consideration. The Final EIS should include such an emissions inventory. If emissions are significant, then the Final EIS also should include an air impact analysis presenting direct, indirect, and cumulative impacts of these activities.

Further, these emissions should be addressed through project design criteria and monitoring. Example measures to consider include the following:

- Prohibit unnecessary idling of transportation trucks;
- Use low-sulfur or alternative fuels;
- Require heavy diesel equipment to use cleanest available engines or retrofits with diesel particulate control technology;
- Maintain engines;
- Expand application area for dust abatement measures and require detailed plans for dust control;
- Require prompt revegetation along new roadways and monitor for five years post-revegetation to ensure success; and
- Monitor effectiveness of road closures after project completion.

Indirect Emissions: The indirect impacts from the use of harvested and/or thinned trees for fuel should be discussed in the DEIS. The DEIS should describe the likely end use for the substantial amount of board feet expected to be generated and should assess any air emissions that may result. For instance, if any of the harvested timber would be used as feedstock for supplying fuel at a facility that provides heat and/or power, or would be converted to wood pellets or biofuels, then the DEIS should include a discussion of the specific use and related air quality impacts, including greenhouse gas (GHG) emissions. There may be mitigation options available to address these indirect emissions.

Aquatic Resources

Although the DEIS provides a description of the current health of watersheds and streams in the project area, we are concerned with the lack of baseline water quality data and wetlands conditions. Baseline information will be important for the decision-maker to assess impacts of the proposed activities. A brief discussion and summary of the best available water quality monitoring data for the Big Moose Vegetation Management Project area should be included in the Final EIS. These data should include *Escherichia coli*, nutrient concentrations, temperature,

and turbidity, if they exist. In addition, both jurisdictional and non-jurisdiction wetlands acreage in the analysis area should be quantified and described.

EPA notes Executive Order (EO) 11990 - Protection of Wetlands (May 24, 1977) states in pertinent part: "Section 1. (a) Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. (b)This Order does not apply to the issuance by Federal agencies of permits, licenses or allocations to private parties for activities involving wetlands on non-Federal property." EPA recognizes the challenges facing the USFS in analyzing, understanding, and ultimately managing wetland resources in a large planning area. However, the Final EIS should describe how the USFS will show compliance with Executive Order 11990, Protection of Wetlands, with regard to this project.

Most activities contemplated under this project (including harvesting/thinning timber, reopening currently closed roads, constructing new temporary roads, and applying prescribed fire) would impact water resources. We are pleased with the selection of project design criteria and monitoring measures to reduce the potential for impacts. We recommend expanding these criteria and measures, as follows: include new temporary roads in the design criteria related to existing roads; monitor revegetation efforts for five years; and monitor breakdown of hydrophobic soils for five years post prescribed burn. In addition, for the design of stream crossings, EPA recommends Best Management Practices (BMPs) to prevent sedimentation of surface waters and restoration as soon as possible to prevent sedimentation flow into streams. The BMPs should be inspected and maintained frequently and should be adjusted in response to inspection findings to protect streams (including fishery spawning areas), wetlands, and riparian corridors from adverse impacts associated with vegetation management activities. Streambank stabilization should utilize bioengineering methods or soft bank protection (as opposed to riprap) to ensure full restoration.

While the DEIS notes that "changes in runoff and flow characteristics, for the most part resulting from beetle kill decreasing live basal area, will likely be a long term effect in the Big Moose Project analysis watersheds regardless of whether harvest operations occur," it is also noted that "[p]resence of standing dead trees and residual live trees and understory in the watershed mitigates increases in water yield." Since the science is still unclear and the pros and cons of beetle kill impacts to watersheds will vary by watershed, we recommend that the DEIS provide a balanced disclosure of positive and negative impacts of both leaving the beetle-killed trees in place and removing them within this particular project area, as well as in the broader context of beetle-killed trees within the entire National Forest.

In addition, the presence and handling of beetle-killed trees has the potential to impact public water supplies by increasing the organic loading to a waterbody. Organic matter interacts

with disinfectants used in the drinking water treatment process to form disinfection byproducts, which are a human health concern. Organic loading may also decrease oxygen levels which can lead to the release of metals such as arsenic, manganese, and iron from sediments. EPA recommends that the Final EIS identify any public water supply intakes downstream from the project area and assess the potential for impacts to drinking water treatment and supplies.

Finally, given the recent court conclusion that logging roads are point sources and thus require National Pollutant Discharge Elimination System (NPDES) permits as a source of industrial stormwater, the DEIS should acknowledge that new and recommissioned logging roads may require permit coverage. See *Northwest Envt'l Def. Ctr. v. Marvin Brown, Oregon State Forester* no. 07-35266 (9th Cir. Aug. 17, 2010).

Threatened and Endangered Species

As noted in the DEIS, suitable and/or potential habitat, consisting of downed woody debris and dense horizontal cover, exists in the Big Moose Vegetation Management Project area for the Canada Lynx, an Endangered Species Act-listed threatened species. The project area occurs within the Hogback Lynx Analysis Unit (LAU). As directed by the Southern Rockies Lynx Amendment (SRLA) of 2008, which applies to National Forests in Colorado & southern Wyoming, the USFS assessed potential effects on Canada Lynx by comparing LAU baseline conditions to changes predicted from the project alternatives. The USFS determined that all action alternatives would increase the amount of temporarily unsuitable habitat within the Hogback LAU. The main activity influencing the determination for all action alternatives is the proposed prescribed fire treatment, particularly in areas outside of the Wildland Urban Interface (WUI) which contain dense horizontal cover and in which aspen is a minor component of the stand. This type of activity is not consistent with the SRLA.

Based on this assessment, the USFS determined that Alternative 2 (Limited Action) best meets the intent of the SRLA because prescribed fire *would not be* used in areas outside of the WUI which contain dense horizontal cover and in which aspen is a minor component of the stand. While the DEIS concludes Alternative 2 is not likely to adversely affect lynx and lynx habitat, we note that USFWS concurrence with this determination is required.

However, the USFS has determined that both Alternatives 3 (Proposed Action) and 4 (Preferred Alternative) are not consistent with the SRLA because prescribed fire *would be* used in areas outside of the WUI which contain dense horizontal cover and in which aspen is a minor component of the stand. A determination was made that both Alternatives 3 and 4 are likely to adversely affect lynx and lynx habitat. Formal consultation with the U.S. Fish and Wildlife Service (USFWS) is required for either of these alternatives.

The DEIS does not include an analysis or determination as to whether the prescribed burning component of the proposed action and preferred alternative would result in a significant impact to lynx and would require an amendment to the Forest Plan (with its own additional NEPA analysis requirements). For purposes of disclosing impacts, as well as clarifying the

NEPA process for this project, this information should be included in the Final EIS. In addition, while it is helpful that the DEIS includes a discussion of project design criteria and monitoring measures selected to reduce potential impacts to lynx from the various project activities, these measures may need revision or expansion in the Final EIS. Based on conversations with the USFWS, we understand that although USFS has had informal discussions with USFWS on this project, formal consultations have not been completed to satisfy Endangered Species Act (ESA) Section 7 requirements. Given your determination that the preferred alternative "may affect – likely to adversely affect" lynx and lynx habitat, at a minimum it appears that the USFWS may require specified measures to protect the lynx population in the project area. Therefore, in addition to disclosing impacts to lynx and measures to mitigate those impacts, we expect that the results of formal consultation, including any USFWS requirements, would be discussed in detail in the Final EIS for this project. The related USFWS biological opinion would provide important information with regard to impacts and mitigation measures and should be included in the Final EIS.

Additional Comments

National Historic Preservation Act: As noted in the DEIS, concurrence is still pending from the Colorado State Historic Preservation Officer regarding your determination of no adverse effect for the proposed action. We would expect any such documentation related to National Historic Preservation Act Section 106 consultations to be included in the Final EIS.

Inventoried Roadless Areas: Under the alternatives section (Chapter 2), it is noted that no treatments will occur in Roadless Areas. However, under the affected environment and environmental consequences section (Chapter 3), it is simply stated that the project is consistent with Management Area prescription and the reader is referred to the Forest Plan. Given that the basic premise of the Roadless Area Conservation Rule is to prohibit road construction and timber harvesting in Inventoried Roadless Areas, we recommend that the discussion in Chapter 3 be expanded to describe efforts to ensure that no treatments will occur in Roadless Areas. Description of these efforts would more obviously assist the reader in understanding your determination that the project will not result in significant impacts to Inventoried Roadless Areas.

Climate Change: The DEIS discussion related to the effects of the proposed project on climate change should be expanded. To fully inform the decision-makers and the public of the proposed project's GHG emissions and potential climate change impacts, we recommend that the Final EIS quantify or qualitatively discuss the expected GHG emissions in CO_2-equivalent terms; translate them into equivalencies that are easily understood; and describe any potential inconsistencies between the action and any relevant Regional, Tribal or State climate change plans or goals, as well as the extent to which the USFS would reconcile, through mitigation or otherwise, its action with such plans. In addition, the Final EIS should qualitatively discuss the link between GHG emissions and climate change. As discussed in the CEQ draft guidance on NEPA and Climate Change, "[b]ecause climate change is a global problem that results from global GHG emissions, there are more sources and actions emitting GHGs (in terms of both absolute numbers and types) than are typically encountered when evaluating the emissions of

other pollutants. From a quantitative perspective, there are no dominating sources and fewer sources that would even close to dominating total GHG emissions. The global climate change problem is much more the result of numerous and varied sources, each of which might seem to make a relatively small addition to global atmospheric GHG concentrations." EPA recommends that the DEIS climate change discussion be revised to reflect the incremental contribution of the action's GHG emissions, when added to past, present, and reasonably foreseeable future human activities affecting global atmospheric GHG concentrations.

The Final EIS should discuss reasonable alternatives and/or potential means to mitigate or offset the GHG emissions from the action. We understand that the action is intended to mitigate the likelihood of future stronger and potentially wide-ranging wildfires in the area. Nevertheless, the Final EIS should discuss whether there are any reasonable alternatives or means to mitigate GHG emissions associated with the proposed action (*e.g.*, would GHG emissions be reduced with alternatives that entail the harvest but omit the prescribed burning proposed under Alternatives 3 and 4?).

Further, EPA recommends that the "Affected Environment" section of the Final EIS include a brief summary of the ongoing and projected climate change impacts relevant to the action area, based on U.S. Global Change Research Program assessments and other relevant peer-reviewed studies. In addition, EPA recommends that the Final EIS identify any potential need to adapt the proposed action to ongoing and projected regional climate change, as well as any potential impacts from the proposed action that may be exacerbated by climate change. For example, how might ongoing and predicted climate change affect the viability of the DEIS goal of promoting aspen regeneration in this area? With regard to exacerbation of impacts, how might climate change exacerbate the water quality and other impacts from this proposed action?

EPA's Rating and Recommendation

Consistent with Section 309 of the Clean Air Act, it is EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this project. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action, EPA is rating this DEIS as Environmental Concerns – Insufficient Information (EC-2). The "EC" rating indicates that EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. The "2" rating indicates that EPA has identified additional information, data, analyses, or discussion that should be included in the Final EIS. A full description of EPA's rating system is enclosed.

We hope that our comments regarding air quality, aquatic resources, and threatened and endangered species will assist you in further reducing the environmental impacts of this project. We appreciate the opportunity to review and comment on this DEIS. If we may provide further explanation of our comments, please contact me at 303-312-6004, or your staff may contact Amy Platt at 303-312-6449.

Sincerely,

Larry Svoboda
Director, NEPA Compliance and Review Program
Ecosystems Protection and Remediation

Enclosure

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment February, 1987